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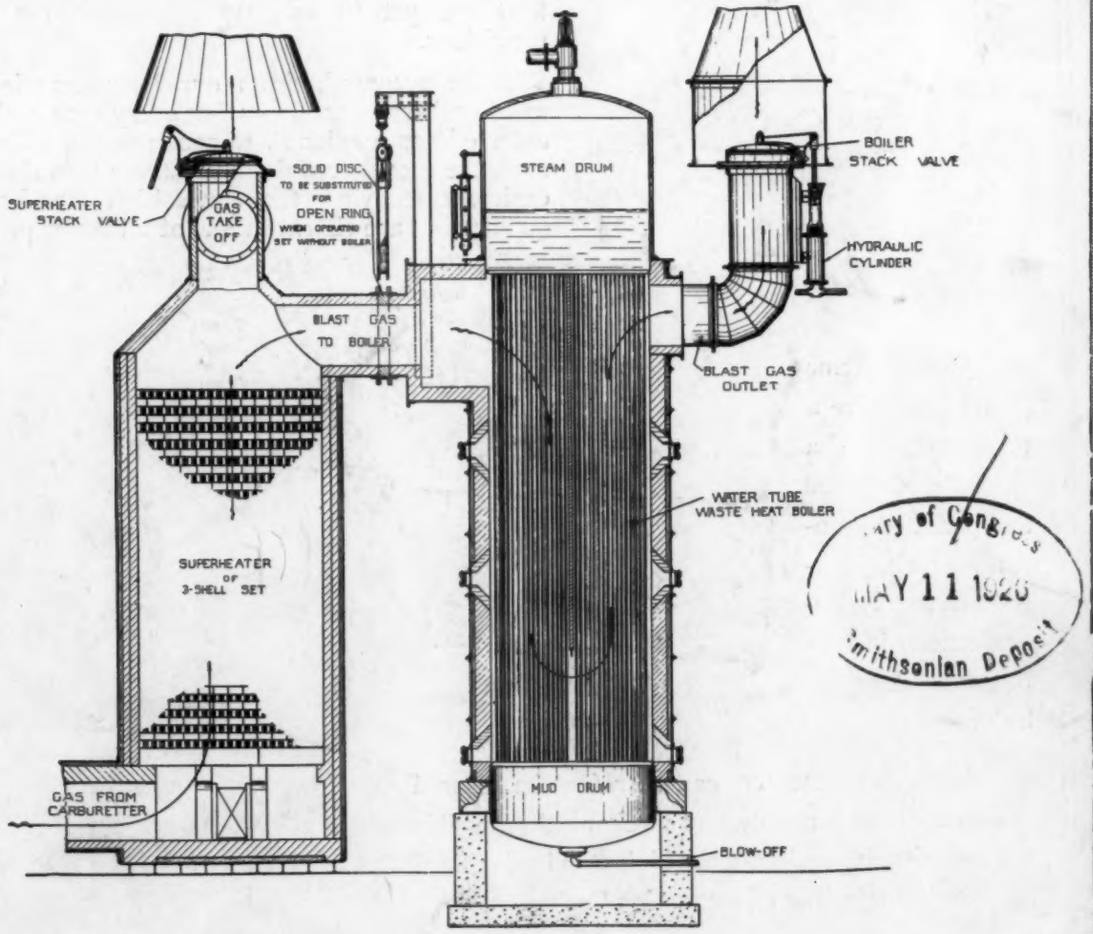

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Index to Contents, Page 4 . Advertising Index, Page 29

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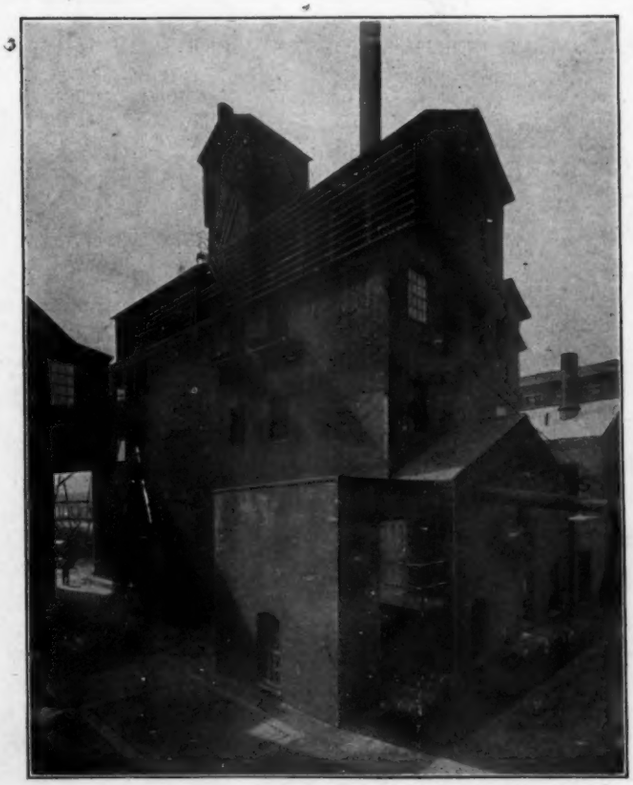

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Contents of This Issue

Gas Light Shows Up the Bean—Jacob B. Jones 399
Making Friends—Preston S. Arkwright 400
Gas in Making Rookwood Pottery—R. J. Paulsen 403
Home Service in St. Louis Via Radio—William H. Matlack 406
The Rotary Displacement Meter—J. Eberle 407
Rate Structures for Large Customers—F. A. Newton 409
General Market Tendency Sound—L. W. Alwyn-Schmidt 410
As The Journal Views It 411
A Gas Appliance Week on the Coast
New Uses for the Gas Holder
Industrial Gas Lesson No. 118 413
Any Time is Gas Time—J. B. Dillon 414
Progress in Gas Technology 415
News of Gas Industry 416

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AMERICAN
GAS JOURNAL

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Gas Light Shows Up the Bean

A play on the green is a better bet than one on the white

Jacob B. Jones

Treasurer, The Bridgeton Gas Light Co., Bridgeton, N. J.

A SHORT while ago I wrote a little "Can House Story" for the American Gas Journal, and after its publication a friend of mine said to me, "I read that Tin Can stuff of yours, and liked it."

Quite naturally I was pleased and asked him just what there was in the story that he liked, and said with such modesty as I could command, that I had been rather disappointed in the story after I had written it.

Imagine the jolt to my pride when he said, "Well, as a Gas Story, it wasn't much, but it did give me an appetite."

While we have a lot of good things to eat in the Garden State, the regular stand-by in the summer time is a dish which the Indians called "Succotash", which reduced to our present day language is just plain lima beans and corn.

The day we have succotash at home, we do not have anything else, for it would be next to sacrilege to mix some other dish with such an epicurean concoction as corn and beans.

A Story of Lucullus

Historians tell us of a Roman gentleman by the name of Lucullus, who had a very dainty way about him in the matter of food; in fact, they lead us to believe that he was almost "finicky", and coupled with this, the historians further credit him with an enormous appetite.

I know now what Lucullus had for dinner, for nobody in this neck of the woods stops eating succotash until they are "plumb full", but by the same token, they are fussy to the extent that they will only eat the little, tender green beans—and they must be green.

Perhaps a little bit of how this crop is handled may not be amiss, for the relation of this story to gas can be summed up in single closing paragraph.

For our own home use, there are enough neighborhood gardens to supply the demand, and the younger boys and girls get their spending money in the summer, by selling the "garden truck" to their neighbors, who do not "keep a garden."

Picking the Beans

The lima beans are picked early in the morning and "peddled" from door to door, so as to be fresh for dinner—and dinner with us is twelve o'clock noon—everybody in our town quits work at twelve o'clock and at 12.10 they have their feet under the table.

This may be a pure localism, but as long as I can remember, this has held good. The only time we refer to "lunch" is when we have company; the rest of the time is dinner at noon, and at night it is supper.

I am digressing from my "Can House" background and must get back to it.

The canner contracts with the farmer for so many acres of bush limas. When it comes time to take them to the factory, they do not stop to pick the beans by hand. A truck drives on the field and the vine is pulled up by its roots and carried to the canning plant, much after the manner of a load of hay.

Sorting the Beans in a Cannery

At the cannery the vines are dumped into a revolving hopper that is almost uncanny in its performance. The vines stripped of the pods, come out on one side, the bean pods on the other, and delivered to the conveyor the beans already to be packed.

Where Gas Enters

Here is where the Gas comes in.

The mechanical element passes out and the human element enters. The bean shelling machine—wonderful as it is—cannot separate the green from the white beans, and the packer knows that he can afford to throw away the white beans, rather than to mix them with the tender green beans.

As a matter of fact, he sells the hard, white beans for soup stocks, and then gets a fancy price for the green beans.

Plant operation makes it more economical to do this "sorting" at night, and after trying every known practice of lighting, they finally adopted gas arc lamps, as being the most desirable.

The picture shows only a small section of one canning plant, where the girls are sorting the beans for color and size. In this particular plant, they are using forty-two (42), 3-mantle gas arcs, from nine o'clock in the evening until five the next morning—altogether eight hours of a lighting load—just when the Gas Man wants to carry it.

All of which is another reason why every situation provides additional sales for gas, if we take the trouble to dig them up.

Making Friends*

The gas company must get and keep business

Preston S. Arkwright

President, Georgia Railway & Power Co.

THE difficulty of keeping this subject within reasonable limits is illustrated by the reply of the editor of a country weekly to an inquiry of an advertising agent as to the territory covered by his paper. He replied: "This paper not only goes from Maine to California and from Canada to the Gulf of Mexico, but I have to work every night until three o'clock in the morning to keep it from going to hell".

So we'll reduce its limits in the beginning by eliminating friendship for friendship's sake and the exalted view of the Thirteenth Chapter of Corinthians.

The friends we want to make are friends for the business.

During the last war, along about 1918 to 1920, gas companies everywhere were having a difficult time financially. Oil was high; coal was higher; and the wages of labor had multiplied. The companies were under regulation and rates could not be adjusted to meet the higher costs. In consequence, for a couple of years or so, gas was sold at less than operating costs.

Now the gas company with which I am most familiar, and it's probably equally true of all others, had enjoyed a continuous prosperity through all its previous history of three-quarters of a century. It had not only met its costs and its fixed charges and its dividends, but it had provided for its own growth and expansion out of its earnings.

All this was forgotten. At a period when unregulated business was garnering riches beyond the dreams of avarice the gas company was paying out for operating costs more than it took in.

The Favor Spirit

We got the notion that we were doing the public a favor to give them gas service; that we were actually giving away gold dollars for fifty cents; that each added customer was an additional burden. We didn't want to sell gas. That spirit permeated the entire organization.

In this situation a friend of mine told me that in his real estate office he heard a bet made that you couldn't go over to the Gas Company and buy a gas stove without getting insulted.

This may have been putting it a little strong, but

* Delivered at the Annual Meeting of the Southern Gas Association, New Orleans, Louisiana, March 17, 1926.

it was pretty nearly a fact. Certainly it was true that needed improvements at the gas works stopped; that no extensions of gas main were made; that the capacity of the works and distribution system was not equal to demand; that the quality of the gas deteriorated; that the pressure was irregular; that gratuitous service was stopped; that the sales force was reduced; that many of the customers went breakfastless to work and supperless to bed. They shivered in the cold bath of the morning and chattered imprecations against the gas company all the day through.

The service was rotten. The gas company lost every friend it ever had. We didn't want the business.

Experience Extended to Other Businesses

This experience was not confined alone to gas companies or other public utilities. You will never see such a subject, "Making Friends", set down for serious discussion in a formal convention of a competitive business industry. The merchant and manufacturer, the jobber, the dealer, ordinarily do not talk about making friends. It is fundamental in his business. He takes it as a matter of course. He is actuated by a desire to secure the business and making friends is second nature with him.

But during the war when goods were scarce and demand was great, and you had to get a priority order to spend your money, and beg on bended knees for the goods you wanted, these merchants and manufacturers and jobbers and dealers were pretty arrogant too. They didn't make many friends in that period and they lost a lot they already had. The reason was—they didn't want the business.

But you see them now, when times have changed. They can't do enough for us.

P. S. Arkwright, President, Georgia Railway & Power Company, Atlanta, Ga.

Not Wanting the Business

It sounds like an anomaly to say that a business institution doesn't want business, but I really think this was the real trouble with the gas business. We were the first of the public utilities. We had a wonderfully useful product. We came before kerosene, at a time when the only artificial light was furnished by a tallow dip and the sperm oil lamp. Our light was so much better than any others that in reality there was no substitute. We became imbued with the idea that we were making a better mouse trap than anybody else; that we could sit down and let the public beat a path to our door. We had a virtual monopoly for years. We didn't have to sell our service. We simply condescended to take orders. We made it just as hard as possible for people to do business with us. No wonder the gas company was regarded as cold and impersonal!

Sometime ago I read an article in a magazine where a family had moved into a new apartment on a Saturday afternoon. They telephoned the neighborhood grocer, introduced themselves, gave their order, and he promptly stocked their pantry with all the groceries they needed—on credit, too. They went through the same process with the corner drug store and everything they wanted was promptly delivered.

No Gas Service

Finally, they went to light the gas stove and found that the service had been disconnected. They telephoned the gas company and were told that the gas company didn't take orders over the telephone. So, notwithstanding that they were busy straightening around to make the new home habitable, the head of the house had to shift all the work on the wife and beat it down to the gas office to sign a long, complicated, iron-clad, soul-mortgaging, formal, red-tape contract. He fell in at the tail-end of a long queue. Having worked his way to the window, at last, he was told he was at the wrong window. Finally, having gotten to the place and signed this terrifyingly legalistic printed-in-red-ink agreement, with its back covered with unreadable fine print conditions, he was notified that his credit was no good and he must put up a deposit. Having finally satisfied all demands he then begged to have the gas service connected so he could go home and let his wife cook

the supper. But he was notified that it was after five o'clock. The gas company's business day was ended and they couldn't think about beginning to earn money out of him until the following Monday.

Now we did do those very things. We made it just as hard as possible for a person to begin to do business with us. We created a bad impression on him at the start. He got the notion that we didn't appreciate his trade. But he had to sign up with us because there was nobody else who could give him the service he had to have.

The Credit Problem

People are very sensitive about their credit. It flatters them to trust them and show confidence in them. It hurts their pride to refuse them credit. But we went on the assumption that all gas customers were deadbeats until they proved themselves otherwise, and in the beginning of our relationships we insulted them by demanding a deposit to protect us against their insolvency or their rascality.

First impressions are most important and we took every opportunity to make the first impression of us the worst a man could have.

Having finally gotten the customer on the books we did our level best to see how soon we could get rid of him. We set up an inflexible routine—bill due on the first of the month; discount lost on the 10th; delinquent list made up on the 12th; notice of past due account mailed out on the 13th. On the 16th printed notice sent that gas will be cut off on 20th, and on the 20th gas cut off.

This applied inflexibly, without exceptions.

The Cut-Out List

By chance I happened to see a cut-out list one day before the orders were executed. It was in the summertime, when the wealthier classes were off on vacations. It had numbers of the best people in town on it. Among others, three members of our own Board of Directors. They weren't trying to beat the company out of a bill. They took pride in paying their just debts. But they were away or sick, or something, and they didn't know they were delinquent. Surely there is somebody in the gas company that can go over the cut-out list and separate the sheep from the goats and make an effort to collect the money and save a few friendships, not to speak of loss of revenue and the expense of disconnecting and reconnecting.

This routine, once upon a time in our town, cut off the gas supply from the richest man in the place. We are in the electric lighting and power business too. A few years afterwards, he built a skyscraping office building and put in his own isolated plant and wouldn't even let us discuss furnishing him central station service.

The Delinquent State

On another occasion—you will think I take very little part in the business because I tell you this came to my attention by accident too—the gas manager came to me with the story that the State of Georgia refused to pay a month's gas bill. It amounted to $150.00, with gas at a dollar per thousand cubic feet, for one month. The meter was right; he had tested it. The bill was owing and, although it seemed an impossible month's consumption, still, the gas undoubtedly had been used. He had been unable to get the custodian of the Capitol to approve the bill. He had consulted the company's lawyers and they had advised him to cut off the gas. Now just think of it—cut off the gas supply from the State Capitol! Wouldn't that have made us lots of friends! And yet, that's precisely what routine would have done.

Finally, the manager called on the Governor of the State. He heard the case and, on investigation, found that unbeknowing to the officers in charge, the negro janitors had been running a pressing club in the basement of the Capitol, all the gas for which registered on the State's meter. So he ordered the bill paid.

And so with all our dealings. We haven't wanted the business. I don't mean the Sales Department haven't wanted the business. They are only a small part of the gas company's personnel, and they are bound by the gas company's policy.

Gas Service No Longer A Monopoly

Whatever may have been true in the past, certainly the gas service is a monopoly no longer. The lighting has all gone. In fact, the loss of the lighting was the first stimulus we had after the initial discovery of the practical application of gas service.

Now, while if it's done with heat it can be done better with gas, still it can be reasonably done with a lot of other substitutes—wood, coke, coal, oil, and in increasingly many cases with electricity.

So it behooves us not only to want the business but to go after the business. Nobody is going to beat a path to our door any longer.

So I hope we will realize that we do want the business and that we can get an almost passionate longing for it to permeate the entire gas organization—not in the Sales Department alone, but in the entire organization—from the works to the meter reader, from the order clerk to the auditor, from the chief executive to the gas fitter's helper. If we can get this spirit throughout the gas organization we will deserve friends and we will make them.

What Such a Spirit Will Do

We will see that the capacity of works and distribution system are adequate; that the mains are extended generally over as wide a territory as is practicable; that the product we make is good and uniform; that it is delivered at constant pressure; that our applications for service are simple; or even that no writing at all be required; that orders are taken over the telephone; that a liberal credit policy is pursued; that the trouble crew responds with dispatch; that gratuitous service is generous; that in every dealing, through every representative, the customer is treated with consideration; that customers' complaints are treated as our personal concern; that we can sometimes be wrong and that our wrongs will be righted; that the customer can be right and we will concede it; that we will banish from our own minds any idea that the public is un-

just or unfriendly to us, and won't permit ourselves to get unfriendly to them; that we'll examine requests with a view to granting them if we can possibly find a reason for doing so; that we will never answer, "The rules forbid", but will give the reason behind the rules; that we won't appear to know it all or to think that the customer hasn't any sense; that we will never be satisfied ourselves as long as the customer remains dissatisfied; that no effort is spared—even a personal solicitation—to collect past due accounts before terminating relationships, or even threatening to do so; that business is sought and rates are made to fit the various types of business; that rates are as low as they reasonably can be made.

The Cheerful Smile and Welcome Word

You remember the old-time merchant—proprietor of a store. He stood just inside the front door and gave the cheerful smile, the welcome word, and the glad hand to the customer when he entered. He didn't wait on him himself, but he showed an appreciation of his coming and saw that his wants were met.

Maybe the proprietor in the gas business can't stand at the office door in person, but he can certainly stand there in spirit and make the customers feel that their business is appreciated and that they favor us by trading with us, and by the sincerity of our own friendship warm into a glow their kindly feeling for us.

Unwilling service is poor service. I don't care what rules we've got or what regulations commissions may impose upon us, we can't be compelled to give as good service as we can voluntarily give if we are only willing. And the same thing applies to rates. No court and no commission can force a rate as reasonable or as well suited to the varying needs as we can voluntarily put in ourselves. Willingness is a part of the service and it includes and will of necessity include courtesy and consideration for the customer and a personal interest in his service troubles.

The gas "company" in and of itself can do no wrong; can make no enemies; can gain no friends. Its character is just exactly the character that we who are engaged in it have and give it. It's capable of furnishing an extraordinarily economical and useful service that entitles it to the friendship of those it serves. If it has enemies we make them. If it's going to have friends we've got to gain them. We people who manage the gas companies don't own them. Really, we represent the customers as much as we do the stockholders. We are trustees for the public as well as for the owners. In reality we perform our duties to the owners best if we first perform it well to the customers.

Making Friends for Gas Service

There are many things we can do to make friends for the gas service. But they will all come naturally when we have first saturated our organizations with the knowledge that our chief aim is to see that wherever practicable everyone who can use gas service to his advantage enjoys the benefit of gas service; that is, that our business is to get and keep business.

We are peculiarly fortunate in the Southern Gas Association in the type of people we have to deal with. They are perhaps a little more sensitive here than elsewhere. They are not used to being ordered around. They want to be treated as individuals with a little personal attention. But treated right, they are responsive, fair minded and generous.

They won't let you be friends to them without their being friends back to you.

Gas in Making Rookwood Pottery*

Details of an interesting industial use of gas

R. J. Paulsen

The Union Gas & Electric Company

PRE-EMINENT among Cincinnati's art institutions, Rookwood Pottery occupies a commanding position on Mt. Adams, overlooking the Ohio River and the hills of Northern Kentucky. Nearby are the beautiful buildings of the Cincinnati Art Museum and Art Academy, from among whose graduates come many of the artists employed in the Rookwood studios.

Rookwood was the name of the estate on which Maria Longworth Storer passed her childhood. In 1890, her father, Joseph Longworth, gave her an abandoned schoolhouse near the river bank, and it was here that the pottery had its beginning, receiving the name which it still bears. In 1883, William Watts Taylor became a partner of Mrs. Storer. Under this arrangement the business expanded and became established on a sound working basis. In 1890, Mrs. Storer transferred her interest in the concern to Mr. Taylor. Two years later the first buildings on Mt. Adams were erected. Here, within a few decades, Rookwood Pottery has acquired an international prestige which has placed the organization in a position of distinction among the ceramic art works of the world.

* From Hail Columbia.

The Clay

The principal material required by the potter, of course, is clay. The varieties used here are found in the neighboring states; Ohio, Kentucky, Indiana, Illinois, Georgia, Tennessee, Alabama, Pennsylvania, New Jersey and the Carolinas, each contributing a share. No imported clay is used, making Rookwood an All-American product. A research department is maintained, which is continually experimenting with mixtures of these clays, as more than one kind is used in the make-up of the body batches. This is overcome dependence on material

Fig. 1. The Vase in the Making

from any particular locality. It is necessary, therefore, to be constantly vigilant to secure the proper varieties for their specific purposes.

After the proper mixture of clay is obtained, the batch is mixed with water in a churn-like mixer, then strained and stored in vats, where it settles to the constituency of thick cream. This cream-like clay, called "slip", is now ready for the artist;; it may either be cast, or worked on the potters' wheel, depending upon the articles required. For the latter, the clay is placed under steam presses and reduced to the constituency of dough.

The Potters' Wheel

The greater part of Rookwood ware is made on the potters' wheel; technically this is called "throwing." This practise dates back thousands of years and is essentially the same today as of old. It is an art calling forth the best in its creator, the clay depending for its artistic form upon the personal touch. Due to this feature, no two pieces of Rookwood are exactly alike, which places the product on an artistic, instead of a commercial, plane.

To obtain this beautiful work of art, a ball of clay of suitable size, after having been thoroughly kneaded, is placed on the center of a revolving disc. The potter first shapes it into the form of a cone. Then, by using the hands and fingers, as the disc revolves, this cone is slowly given shape, until at last the skill of the artisan has fashioned a thing of beauty.

The Vase in the Making

Figure 1 shows such a vase in the making. Notice with what intentness the artist is watching his work take shape. This clay form is later placed in the moist room, where it is kept until ready for the next operation. In due time the moist vase reaches the hands of the decorator or artist, who sketches thereon his idea with India ink and brush, adopting the general motif to fit the particular object. In this decorative work the artist is allowed unhampered leeway in development of his ideas, thus giving Rookwood high and rare artistic attainment. Having established the outline and general scheme, the artist then completes the design by what is called "slip painting." This is the method of painting the vase with diluted clay, into which has been mixed the mineral powders. As these colors emerge from the final firing process entirely different from what they are at this stage, it is necessary for the chemists to make constant research and experiments in order that the colors desired in the finished product may be obtained.

Figure 2 shows an artist at work in his studio, sketching a Venetian scene in India ink. As this ink readily fires out in the kiln, he is at liberty to follow these lines or not as the scene is developed and the colors applied. The vase in its dry state is then ready for firing.

Fig. 2. The Artist at Work

Pieces ready for the kiln are placed in fire-clay boxes, called saggars. These are placed in the kiln, one on top of another, with rolls of soft clay between them to form flame-tight joints. Figure 3 shows men carrying the holders into the kiln.

Strangely enough, it is easiest to carry these boxes on the head, a practise invariably found in the ceramic industry. When stacking in the kiln is completed, the door is sealed with fire-brick and clay, and the kiln is then ready for firing.

The Kilns

These kilns are of the periodic type and resemble huge bottles. They are approximately twelve feet in diameter and ten feet in height to the spring of the crown. They are arranged for combination up-and-down-draft; by adjusting the dampers, the heat may either be directed straight up and out, or it may be directed up and then down, and out through the flue.

All the Rookwood kilns are fired with gas supplied by The Union Gas & Electric Company. This famous pottery was one of the first in the ceramic industry to use gas for this purpose. The burners used are, as shown in figure 3, of the Bunsen Tube Atmospheric type, having six burners to a set. Eight of these sets are used in each kiln. The gas is fired into a combustion chamber, the heat traveling up or down, as regulated by the operation of dampers. In firing Rookwood an oxidizing flame is essential; gas is the most economical, as well as the most easily controlled, fuel for this requirement.

Firing the Kiln

When the kiln is ready, a slow fire is started, raising the temperature to about 250 degrees Fahrenheit, to drive out the moisture of the clay. This process is called "water smoking." When this is completed the dampers are closed, and the temperature is increased to about 2,200 degrees, the heat traveling first to the top of the kiln, then down and out, as has already been described.

Accurate heat control must be maintained at all times to get the proper burning of clays and colors. For the lower ranges a pyrometer coupler is used exclusively; for higher temperatures the pyrometer is checked by the use of Segar's cones. These latter devices are placed at various points inside the kiln and may be observed through peep-holes provided in the walls. The cones are composed of a material having a definite melting point, and are selected according to the temperatures required. They are held in place in a vertical position by a fire clay base; when the temperature has reached the proper point, the particular cone will melt and turn down. Thus very close temperature control is maintained.

To overcome the great stresses and strains in the brick work due to the intense heat, the kilns are girded by heavy steel expansion bands. Even with this precaution, the brick work occasionally cracks, and from time to time must be repaired.

Operation Lasts Eight Days

After thirty-six hours the gas is shut off, and the kiln is allowed to cool. The sealed door is removed,

Fig. 3. Carrying the Pottery Into the Gas-Fired Kiln

and the finished product is carried out. The entire operation requires seven to eight days.

The unusual finish on Rookwood Pottery, which is due in some degree to the peculiarities of the firing process used, is the outstanding quality of her product which has made Rookwood the leader of the ceramic industry. In all the art centers of the world Cincinnati is known as the home of Rookwood Pottery.

Development of improved methods has been a continuous growth, from the production of the sombre colors of the original firings, to the beautiful soft matt shades of the present day. This advancement has largely been due to Rookwood's unique combination of scientific research and free development of artistic ideals.

PUBLIC UTILITIES

In a booklet issued under the above title, Chas. McLean of Dubuque, Iowa, presents a plea for the present cost of reproduction as the just basis of valuation of public utilities. The booklet starts with a definition of the constitutional rights of property and gives the history of court decisions which have affected the manner in which constitutional rights of property are determined. He points out in his book instances how rate commissions reverse themselves and develops the contention that the average cost theory is without foundation in law or equity and is not based on economic, scientific or commercial principles.

The author then goes into a detailed description of the present law and of the manner in which it is constituted. He takes up in particular the question of "Due Consideration." He develops that "due consideration" can mean "only such consideration as is just, adequate and complete, all circumstances considered." In this connection, the Bell Telephone case is mentioned and the opinion of the minority of the Supreme Court of the United States on this subject is studied in detail.

Home Service in St. Louis via Radio

How the Laclede Gas Company is educating the home manager

William H. Matlack

THE Home Service Department of the Laclede Gas Light Company, St. Louis, via KSD (Radio station of the Post-Dispatch) is daily bringing pleasure and culinary assistance to thousands of women all over the Middle West. Vincent M. Carroll, Director of Public Relations for the Laclede Gas Company, says: "The Home Service hour has become a fixed part of many a home manager's daily program. She listen-in regularly every week-day morning from 10 to 10.30 and hundreds of them write Miss Wethrell for additional information regarding culinary and home management problems."

Just how far-reaching and valuable this phase of home service work is may be judged by what the Post-Dispatch had to say regarding the work recently. "The Home Service" programs are under the direction of the Home Service Department of the Laclede Gas Light Company of St. Louis, the broadcasting being done by Miss Helen Wethrell, director of that department. Miss Wethrell has four assistants, all trained domestic science experts. For their use the Laclede company has established a model kitchen in which household research is conducted as a basis for the radio programs. Therein also, are held the daily free cooking classes of the Home Service department.

Miss Helen Wetherell Broadcasting Home Science

Every Recipe Tried Out

In broadcasting on cooking Miss Wethrell dictates to her radio listeners an outline of the recipes, giving ingredients and the quantities of each to be used, then explains how they should be mixed and all the various steps to be taken in preparing, cooking, and serving the food under discussion. It may be bread, a soup, a meat, a vegetable, a salad or a dessert.

It isn't theoretical cooking which is taught in this course, for every recipe given over the radio has first been tried out and found successful in the Home Service kitchen.

The kitchen was established by the Laclede company to enable the women of St. Louis to keep abreast of the food styles, to give good cooks a chance to learn the latest wrinkles in oven heat control and the like and to teach the rudiments of kitchen art to the beginners. The classes are free and are held at 2 P. M. every weekday but Saturday.

Even Men Attend Classes

Young women struggling with the intricacies of homecooking after years in offices, matrons, elderly women, even men, attend the classes. Each day a demonstrator prepares the foods chosen for that lesson, cooks them and then serves the finished product to those present, explaining each detail as she goes along and answering questions. The visitors enter the demonstration kitchen, receive mimeographed sheets outlining the lesson, take seats where they desire, and at the close depart or stay to discuss their problems, as they like. No questions are asked of the class, no names are taken, no advertising is distributed. It all is informal.

The organization established and maintained for these classes makes possible the broadcasting done by the Home Service Department to KSD listeners.

Without the demonstrators and the completely equipped model kitchen, it would be difficult to give the same standard of service to the thousands of women who attend the radio class at 10 o'clock each week-day morning. For these women are told, if they want recipes which are not given over the radio, to write the Laclede company for them. And hundreds have written. Many of their questions call for research work in the kitchen to evolve new recipes. But it is done gladly.

A Shut-In's Gratitude

Some of the letters bear a touch of pathos, as for instance, one from a Northern Illinois woman who

because of illness has been unable to leave her home for more than a year, and who expresses deep gratitude for the recipes which she copies daily in hope that soon she will be well and able to use them.

Another, from a Chicago woman contains a hint of humor. She wrote: "Each morning when I am home I tune in to hear your recipes and enjoy hearing you so much. You know that Chicago gives many such talks, but none as good nor are any of the other voices as pleasing as yours.

"My cook even steals in to hear you and it gives her much joy as she is an old colored woman, who comes from St. Louis. She has been with us for many years and yours are the only recipes she accepts gracefully."

Letters from All Over

From St. Louis, interior Missouri, Illinois, Indiana, Iowa and Kansas many letters have come and even one from the faraway apricot orchards of California. They tell a story of this additional chapter in the utilization of radio, by which women in their homes in cities and in isolated farming communities alike, learn how to vary their menus and improve their cooking.

This kind of educational work is far reaching and will be a big factor in teaching folks every phase of public service company efforts to give service; it will assist materially in selling public service company securities; it will create a desire for modern kitchen equipment and gas for fuel and above all it will build up much public good will.

The Rotary Displacement Meter*

Some actual operating experiences

J. Eberle

Engineer, Albany Municipal Gas Company

THE gas meter is the money gauge of the gas company, and for this reason it is only natural that some phase of the meter question should be given here.

The object of this paper is not to show the merits of a particular meter, but to give actual operating data on a particular type of meter—in this case the rotary displacement meter.

The rotary displacement meter is modeled after the two impeller type blower, so commonly found in the gas industry. The use of ball bearings allows the meter to operate on a pressure differential of less than one inch of water. The volume displaced by the meter per revolution is known and this is counted by a mechanical counter. The meter is equipped with a pressure-volume temperature-time recording instrument, which gives a written record of the work done by the meter. The chart is moved by the meter, while the time is recorded on the face of the chart.

Making Calculations

The calculations are made by obtaining from the chart the average pressure and temperature by means of a radial planimeter. These quantities are substituted in the formula $\frac{VP}{T} = \frac{V_1P_1}{T_1}$, to get the corrected volume.

In the above calculations the dreaded "personal error" enters. The first thing the writer ever heard of the rotary displacement meter was that there was too much chance for personal error. To determine just what this error amounts to, the writer has taken charts for three different loads, assumed errors of +25 and —25 on both pressure and temperature readings on the planimeter, and made calculations for these figures. There are eight different ways that the assumptions may be made.

They are as follows:

1. + 25 Pressure Planimeter
2. — 25 Pressure Planimeter
3. + 25 Temperature Planimeter
4. — 25 Temperature Planimeter
5. + 25 Pressure Planimeter + 25 Temperature Planimeter
6. + 25 Pressure Planimeter — 25 Temperature Planimeter
7. — 25 Pressure Planimeter + 25 Temperature Planimeter
8. — 25 Pressure Planimeter — 25 Temperature Planimeter

Results

The following are the results of calculations on the eight assumptions:

	Press. Plan.	Press.	Temp. Plan.	Temp.	Corr. M.C.F.	M.C.F. Diff.	%
			First Day (Correct Figure = 5662)				
1.	5795	10.54	4364	110 F.	5680	+ 18	+ 0.32%
2.	5745	10.38	4364	110	5644	— 18	— 0.32%
3.	5770	10.46	4389	111	5652	— 10	— 0.18%
4.	5770	10.46	4339	109	5672	+ 10	+ 0.18%
5.	5795	10.54	4389	111	5670	+ 8	+ 0.14%
6.	5795	10.54	4339	109	5690	+ 28	+ 0.49%
7.	5745	10.38	4389	111	5634	— 28	— 0.49%
8.	5745	10.38	4339	109	5654	— 8	— 0.14%
			Second Day (Correct Figure = 3822)				
1.	3817	9.18	3009	106 F.	3840	+ 18	+ 0.47%
2.	3767	8.96	3009	106	3804	— 18	— 0.47%
3.	3792	9.18	3034	107	3816	— 6	+ 0.16%
4.	3792	9.18	2984	105	3828	+ 6	+ 0.16%
5.	3817	9.18	3034	107	3833	+ 11	+ 0.29%
6.	3817	9.18	2984	105	3847	+ 25	+ 0.65%
7.	3767	8.96	3034	107	3797	— 25	— 0.65%
8.	3767	8.96	2984	105	3811	— 11	— 0.29%
			Third Day (Correct Figure = 2301)				
	Press. Plan.	Press.	Temp. Plan.	Temp.	Corr. M.C.F.	M.C.F. Diff.	%
1.	2176	5.92	2250	114 F.	2319	+ 18	+ 0.78%
2.	2126	5.60	2250	114	2283	— 18	— 0.78%
3.	2151	5.76	2275	115	2297	— 4	— 0.17%
4.	2151	5.76	2225	113	2305	+ 4	+ 0.17%
5.	2176	5.92	2275	115	2315	+ 14	+ 0.61%
6.	2176	5.92	2225	113	2327	+ 21	+ 0.91%
7.	2126	5.60	2275	115	2280	— 21	— 0.91%
8.	2126	5.60	2225	113	2287	— 14	— 0.61%

These figures show that the personal error is not as great as many believe. The 25 was assumed as a large error, and is very seldom made, even on irreg-

*Paper read before the Schenectady meeting of the Gas Section of the Empire State Gas & Electric Association, March 3 and 4.

ular curves. To prove the above statement, the writer had two men, one a clerk, and the other an electrician, run the planimeter over two of these charts of different degrees of regularity. Each curve was traced twice by each man and the readings follow:

Clerk

Jan. 17				Feb. 17			
Press.	Plan.	Temp.	Plan.	Press.	Plan	Temp.	Plan.
8162	15404	11532	7647	2763	2937	3468	3837
2423	9065	7166	3280	0608	0779	1347	1714
5739	5739	4366	4367	2155	2158	2121	2123
Av. = 5739		Av. = 4366		Av. = 2156		Av. = 2122	

Electrician

Jan. 17				Feb. 17			
Press.	Plan.	Temp.	Plan.	Press.	Plan	Temp.	Plan.
12586	6319	9007	5862	6427	6539	6055	6130
6852	590	4653	1507	4277	4386	3944	4021
5734	5729	4354	4355	2150	2153	2111	2109
Av. = 5732		Av. = 4354		Av. = 2152		Av. = 2110	

Hudson Valley Reading

Jan. 17		Feb. 17	
5731	4353	2151	2108

These figures show that the error of 25 which was assumed is a large error and that to be 25 points off on the reading the planimeter must leave the curve.

An appreciable error may be made if the pressure and temperature pens are not properly and regularly adjusted. Checks should be made several times a day if necessary.

Slippage

Another over-estimated item is "slippage." For all loads over 15 per cent of rating, the slippage to the writers' mind may be neglected. On the 16 in. by 32 in. meters measuring gas for Albany, the slippage at 10 per cent rating amounts to 195 cubic feet per hour or 4,680 cubic feet per 24 hour day. This amounts to 0.8 per cent, while at 15 per cent rating it drops to 0.4 per cent. At about 60 per cent rating the slippage reaches zero, due to the fact that the speed of the impellers becomes equal to the speed of the gas. Beyond this point, the slippage is in the opposite direction, due to the fact that the impellers are traveling faster than the gas, causing the meters to register more than it actually passes. However, this negative slip is no greater than the positive slip and may be neglected.

That slight errors in readings will average out over a period is shown by the fact that the two meters measuring gas for Albany during January showed only a difference of 16,000 cubic feet, while the meters measured 138 million cubic feet of gas.

Results of Certain Tests

These meters have never been checked against another type of meter, as the present connections do not permit. However, results of tests made by other companies are available and the writer has obtained three of these, which will give an idea of the performance of these meters.

Test No. 1.

The Central Illinois Light Company, in December, 1922, made a 31-day test of a 12 in. by 36 in. Connersville rotary meter against a wet meter. The wet meter registered 43 million feet of gas, while the rotary displacement meter read 0.55 per cent fast.

Test No. 2.

The Indiana Coke and Gas Company made a similar test of 31 days using a rotary displacement meter against a wet meter. The wet meter registered 58 million feet of gas, while the rotary displacement meter registered 0.54 per cent fast.

Test No. 3.

The Milwaukee Gas Light Company test of a rotary displacement meter against a Thomas meter was a 21-day test. The total registration was 322 million, registered by the rotary displacement meter, which was 0.2 per cent more than that registered by the Thomas meter.

The Syracuse Lighting Company has been operating a rotary displacement meter for two years and periodic tests against a wet meter show a variation of less than 1 per cent.

Although the writer's experience with the meter covers only a short length of time, figures indicate that the meters are registering within 1 per cent, and certainly the figures given in this paper are convincing as regards personal error and slippage.

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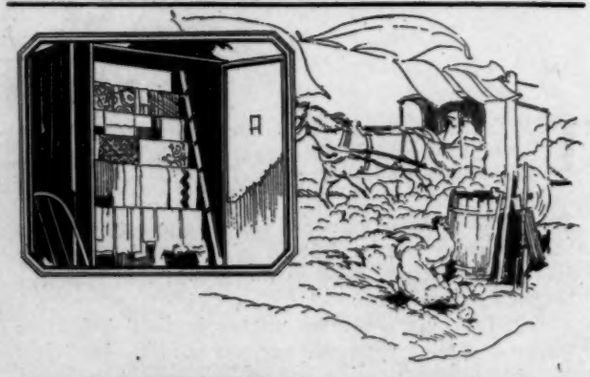

You WASH them clean, *but*

How Do Your Clothes Dry?

Notice your wash drying on the line, . . . the air filled with swirling dust, chickens in the yard, perhaps, the grocer's horse nearby and other sources of contamination everywhere; the very winds that dry your clothes are laden with germs.

When the GAS HEATED CLOTHES DRYER comes into your home, clean washings come to stay. It dries your clothes as fresh and sanitary as you wash them.

Don't dry another week's washing on the old fashioned back yard clothes line. Let us show you how much simpler it is to dry clothes really *clean dry* with a *Gas Heated Clothes Dryer.* Come in today.

(Your Name and Address)

A.G.A-563

Dry Clothes with Gas

Rate Structures for Large Customers*

The importance of equitable rates for the future of gas

F. A. Newton

Hodenpyl, Hardy & Co.

CERTAIN statements appear in the last issue of the official publication of the American Gas Association which are so pertinent to this subject, that I shall repeat them here.

"It should be apparent to every right thinking man engaged in the gas industry that, in spite of recent increased sales, industrial application of gas, water and space heating, are still in their infancy."

That statement cannot be challenged successfully. Never before has the demand for gas for industrial and heating purposes been so great and so insistent. Never has the gas industry been as alert to the opportunities along these lines. We are on the threshold of a tremendous development in the use of gas on a large scale for heating and for industrial needs.

Competition and the Gas Industry

Again referring to the article mentioned, this statement appears:

"Competition with other available fuels is keen, but can be successfully met by sound and logical rate making, based on equally sound and logical analysis and allocation of all costs."

The conclusion is reached that—

"If, however, we do not first 'sell' the necessity for equitable and therefore correct rates to ourselves, then to the public and next to our regulatory authorities, we can anticipate but little progress."

These statements are, I believe, entirely correct.

A Summary of the Gas Situation

The situation which confronts the gas utilities today may be summarized as follows:

1. We are faced with an opportunity to increase the use of gas for heating and industrial purposes on a tremendous scale.
2. Most gas utilities have but one rate and that is the ordinary meter rate based on quantity only.
3. A rate based on quantity only is a serious handicap to the development of industrial and heating business. It is inflexible because it does not meet the varying characteristics of the different types of industrial and heating loads. It is inequitable because it fails to take into consideration the fact that fixed charges are fully as important as ordinary operating expenses.
4. The proper rate schedules can be designed which will be flexible and equitable and which will secure and hold the business in question.
5. The chief reason why rates of this character have not been adopted generally, is our own inertia—our failure to fully appreciate the importance of the problem. Like the weather—we discuss it often but don't do anything about it.

A Lesson from the Electrical Industry

The electric utilities have for many years used load factor rates, i.e., rates which recognize the consumer's demand as well as the quantity of energy used. The development of power business has been one of the outstanding features of the electric industry in the last two decades.

The rates designed by the electric utilities have been successful. No one in that industry would consider returning to the use of a rate based on quantity only. They would not for a moment consider putting themselves in the position most gas utilities are in today.

I have never been able to find any reason why load factor rates, commonly termed "demand" rates should not be used for gas service as well as for electric service. Yet it proves difficult to arouse the enthusiasm of many gas men on this subject, even though they freely admit the need of a more flexible rate structure than at present used.

The "Holder" Argument

It is contended by some people (not many gas men, as they know better) that the holder—the ability to store gas in limited amounts—eliminates the necessity for load factor rates. Let these people look to the distribution system, which usually represents 50 to 70 per cent. of the investment of a gas utility and they may see readily the importance of the demand factor on the cost of furnishing gas. If it costs 40 cents per 1,000 cu. ft. to put gas in the holder, and yet gas must be sold at over $1.00 per 1,000 cu. ft. to make a fair return on the value of the property, it is evident that fixed charges must be a very large and important part of the total cost of the service.

Large scale production means lower unit costs. In turn these lower costs per unit make it possible to sell at lower rates. The far sighted gas man seeks industrial business where large volumes of gas may be sold. He seeks business which will increase his output without a corresponding increase in his investment. In other words, he seeks to better his plant's load factor. Stated another way, he endeavors to distribute his fixed charges over a greater number of units of his product which is cubic feet of gas.

Rates Should Distribute Costs Equitably

At the same time he cannot, of course, refuse to take on business with a poor load factor. He can

(Continued on page 412)

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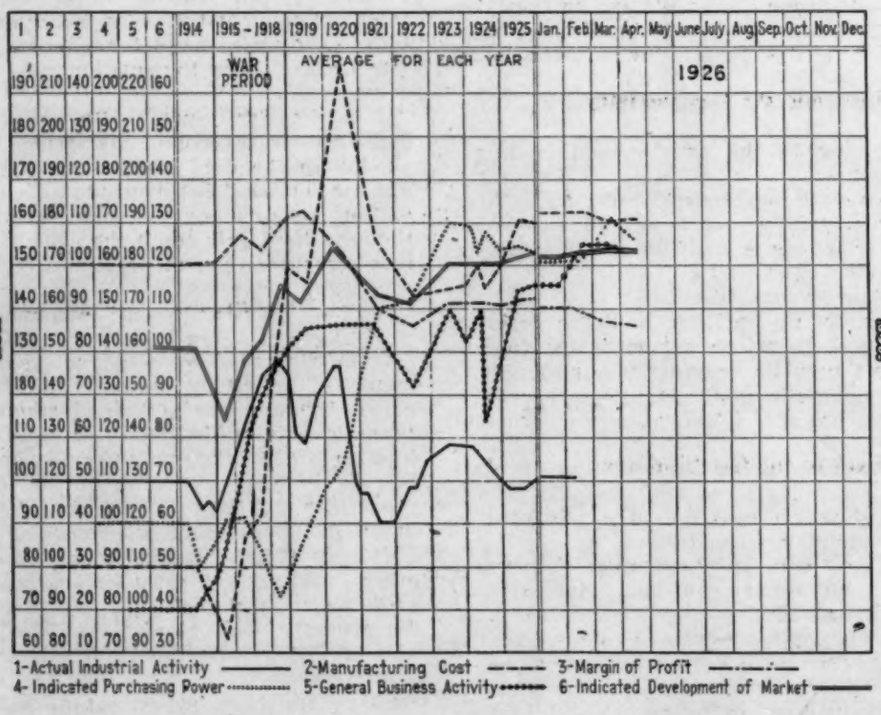
*Presented at the Annual Meeting of Michigan Gas Association.

General Market Tendency Is Sound

Much contradicting news from many quarters

L. W. Alwyn-Schmidt

THE nation's business consists of accumulated transactions in a multitude of commodities of very varying character. This being the case, it can not surprise that opinions differ very widely on the condition of business, according to the corner of the market where the news comes from. So, we hear of increased sales in the mail order houses, but of a drop in retail trading transactions in many Western communities around easter time. We see that certain branches of the textile industry are quiet, while others have difficulty in filling orders. The news columns, in fact, are now just full of contradictory information, making it extremely difficult to come to a definite conclusion as to the future turn of affairs.



Business men, relying for their decisions upon carefully collected statistics, are often inclined in such a case to dispense with statistical conclusions, and to follow a line of their own. Sometimes their personal judgment may serve them well; more often they find themselves at fault. And in almost every case where results are forthcoming, it is found that personal judgment had been based upon some special information which had not been taken care of in the statistical study of the situation.

Common Sense Prevails

In the end common sense prevails. So it is a matter of common sense that the high price of any commodity can not withstand the pressure of the lower price of a similar commodity or of any substitute that may take its place. Just as well as it is absolutely unthinkable that anybody can continue for any length of time to sell an article at a lower price than its cost of production. Whenever prices, therefore, are high it is easy to predict their collapse, provided a sufficient supply of a lower priced competitive article can be found. And—what is more important for the present situation,—prices will rise if production becomes unprofitable at the existing rates.

It is for this second reason that we have steadfastly maintained in recent months that the present low levels of prices can not be expected to continue indefinitely and that higher price levels will have to be expected in most classes of manufactured goods at an early date. The steady decline of prices can not have been a surprise to those, who have closely followed the price situation all over the world. The rise of commodity values during and after the war could not continue indefinitely. Attempts, therefore, were made to re-establish money values which, as is often the case, have overshot their mark. Prices as the result have declined, which means that the cost of labor today is higher than the cost of the article produced with its aid. The accumulated savings of labor are purchasing a

(Continued on page 414)

As The Journal Views It

NEW USES FOR THE GAS HOLDER

The gas holder has often been considered by those, who do not understand its function, a sort of nuisance. It has been condemned many times for spoiling the appearances of a neighborhood. Attempts are always being made to prevent erection of new gas holders. All of this, of course, is most misguided, for it has often been pointed out that gas companies do not erect holders as an amusement. A holder is of considerable expense to the gas company, both to maintain as well as to erect, and holders exist solely for the benefit of the community that the gas company serves.

This is, of course, no reason why the gas holder should not be made as attractive as possible. It can be made more attractive than it generally appears. This has been shown by experience. It is possible to make use of the gas holder for certain new, interesting and very useful purposes. Thus, we read with interest of the fact that officials, identified with the air-mail service, have started a movement in Michigan to use the gas holders as a mark to guide the postal aviators. We also hear that this has been done likewise farther west. This seems to be particularly applicable to the waterless type of gas holder which does not move up and down in accordance with the amount of gas contained in it. One holder of this type has been used for guiding aviators, by pointing a huge white arrow at the top, which may be flood-lighted at night.

From another source we also learn that the gas holder is being used to advertise town names. Electric signs erected on such holders are easily read and very attractive, and all in all, they very likely improve the appearance of the holder.

These news items are interesting in showing that after all, even the most unattractive, and so-termed undesirable structure like a gas holder, can find a new use besides the one for which it was originally intended and which is not manifest to the average citizen that is served by the gas company. Perhaps these new developments will help to counteract the opposition that is always aroused in communities when the gas company asks to be permitted to erect a new holder, so as to serve its customers properly.

☼ ☼ ☼ ☼

A GAS APPLIANCE WEEK ON THE COAST

Not long ago, the State of California was agog with demonstrations and exhibitions of an educational nature sponsored by the Gas Appliance Society of that state. This Society first interested itself in educating the people and particularly the housewife to understand and appreciate the economy, efficiency, safety, cleanliness, ease and speed of gas appliances. To do this, they hold, once a year for a period of a week, a series of demonstrations and exhibitions in various cities and towns of the commonwealth in which the gas companies, manufacturers of appliances and others interested join in giving the widest possible publicity to the gas appliances and to the function that it plays in the modern kitchen and home. Simultaneously, advertisements appeared in all newspapers, pertaining particularly to the work being done during Gas Appliance Week. In the last Gas Appliance Week, the advertisements were written by Camp-Fire Girls.

This is an undertaking which has been featured in California. The results have been so satisfactory and the value so evident that it would appear as if gas companies in other states could well emulate this example. There is much to be gained from proper publicity work in making known what gas appliances can do for the housewife in the modern home. When such publicity work is carried out in a joint movement, including all primarily interested in the industry within boundaries of the State or a section, a far greater effect is obtained and results are so much more satisfactory than when the publicity is confined to a single company or a single city.

The attention of the gas industry is called to the work being done along these lines in California, which has been so successful. It is an enterprise which has much to offer those that are progressive enough to indulge in such widely distributed, high-powered, gas appliance publicity.

RATE STRUCTURES FOR LARGE CUSTOMERS

(Continued from page 409)

and should, however, see to it that such business does not become a burden on the other users. In other words, the rate schedule should distribute the cost of the service as equitably as possible among the various classes of consumers. We cannot expect to apportion the cost of service with absolute accuracy among all of the consumers. Accuracy must be sacrificed to convenience of classification. We can, however, obtain substantial justice for the various classes of business carried. We should not do violence to existing conditions even if we could.

Conditions arise when adjustments in rates are necessary. Increasing or decreasing costs make it advisable to raise or lower rates. Sometimes these cost changes are largely confined to operating expenses; again they are chiefly concerned with fixed charges. The adjustment in the rate schedule should be made to conform to the nature of the change in the cost of the service. Such adjustments are practically impossible with rates based on quantity only. This rate lacks flexibility. A load factor rate, that is a rate recognizing demand as well as quantity of gas used, lends itself readily to adjustments to meet any condition of the character indicated.

Old Rate Structures Must Change

All these things have been said before. They are fundamental principles of equitable rate making. Yet most of us go on with the one meter rate, based solely on quantity used. In my opinion we must change our practice in this respect. Conditions are rapidly forcing us to give more attention to these matters. More of us are awakening to the realization of the shortcomings of present rate structures when it comes to handling industrial and heating business. We cannot, of course, tear down our present rate structure and build new ones summarily. We can, however, devise new rates to take care of the industrial and heating loads. We can also exert every effort to acquaint the public and regulating authorities with the fact that present rate structures are inadequate to enable us to get the large loads which can be secured with proper and logical rates. We can demonstrate that present rates are holding back that full and complete development of the business which is as desirable from the standpoint of the general gas consuming public as it is from the standpoint of the utility.

The Demand Rate

A demand rate consists of a charge based on the consumer's demand and in addition a charge based on the amount of gas used. Sometimes the demand charge is stepped down as the size of the demand increases. The same is true of the gas charge. The manner of apportioning costs to determine the amount of the demand charge and the amount of the gas charge has been described thoroughly again and again. It is a subject which is entitled to treatment by itself and at length.

These things are matters of practical rate making, depending on the conditions in each case. I believe that in the case of the large users, the demand should be measured and not estimated. There should also be a definite relation between the greatest demand made by the consumer and the minimum demand charge he must pay. This means that there must be protection against extreme fluctuations in consumer's demands and bills.

Water Heating

Turning from the subject of large industrial and heating business, permit me to say a few words with respect to water heating. Here is a problem which gives many of us a great deal of concern. This is extremely desirable business. Yet we must frankly face the fact that the usual rate is too high for its proper development. It is a service of great value to the great majority of homes. There ought to be water heaters in a much greater proportion of homes than there is now. I am convinced that it is not the cost of the heater which generally prevents its greater use. It is the widespread fear of the gas bills which will result from its use.

Another Electrical Example

Here again I think we may profit by experience of the electric utility. Residence rates for electric service are designed specifically to encourage the use of appliances, such as vacuum cleaners, washing machines, refrigerators, etc. Most people today pay little attention to the cost of operating these appliances. They realize their rate decreases in proportion to their increased use of these devices and the value of the service they get from them far outweighs the cost of their operation as reflected in their electric bill.

Under the prevailing gas rates the consumer with a water heater generally pays the maximum rate for the gas so used. There is no direct inducement to a freer use of gas for such purposes. The usual gas rate, based on quantity only, does not lend itself to an adjustment to meet this condition. Some way out of this situation must be found for those of us who have rate structures of this type. I am having an investigation made of many hundreds of consumers' accounts in a number of cities, large and small, and I think a successful conclusion is in sight. The investigation is not far enough along at present to enable me to state any final conclusions. I want to give the plan in mind a fair trial first. If it works it is another story to be told later.

INDUSTRIAL GAS LESSONS

IF IT'S DONE WITH HEAT — YOU CAN DO IT BETTER WITH GAS

Lesson No. 118

Combustion

Cannel Coal and Gas Coal

Another type of bituminous coal is cannel coal. This is a type of coal which does not appear to belong to any one of the classes into which coal is generally divided but is included here as well as anywhere. These coals are hard and black and yield a large amount of gas when burned. Only seven per cent of fixed carbon is present in the coal. They may be used for gas making by the retort roasting process.

Cannel coal, as may have been concluded from the fact that it yields a large amount of gas when destructfully distilled, contains a particularly high percentage of volatile matter. It is a coal that burns with a bright flame and in fact so luminous is this flame that the coal was originally called, "candle coal." It is a fact that small splinters of this coal are easily ignited and they can be set on fire by means of a lighted match. The richness of the coal is due to the fact that it contains spores, spore cases and seed coats of plants, as well as the resinous or waxy ingredients of vegetable matters. At one time this coal was employed for the distillation of oil. Another peculiar property of this coal is that it will break like glass, with a shell-like fracture. This is due to the fact that its structure is very regular and that it is free from woody material.

The analysis of a typical cannel coal follows:

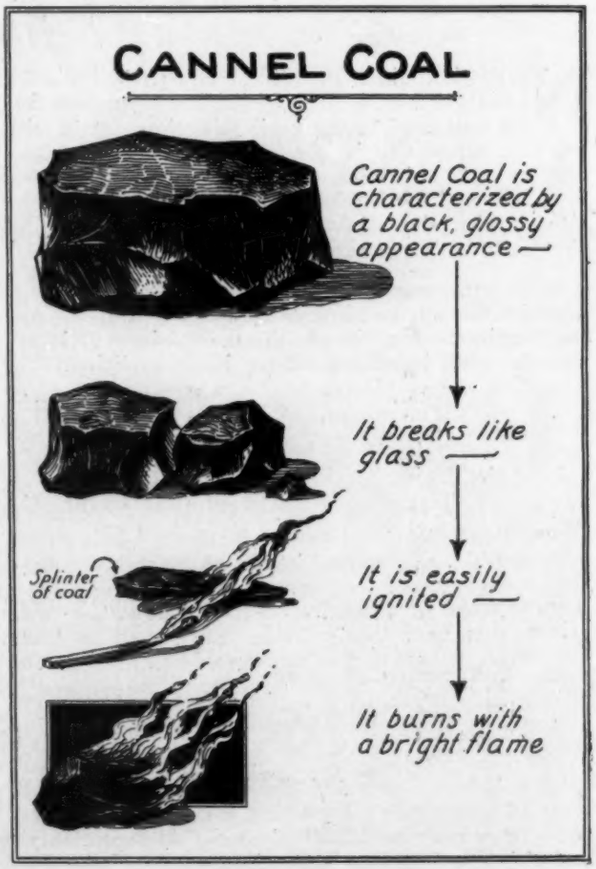
Moisture	2.36
Volatile matter	48.40
Fixed Carbon	38.75
Ash	10.49
Sulphur	1.20
Hydrogen	6.47
Carbon (total)	71.98
Nitrogen	1.16
Oxygen	8.70
Heating value	13,770 B.t.u. per lb.

Bituminous Gas Coals

These coals are next in the series. They melt, cake and yield coke. They contain nitrogenous substances and yield ammonia which is scrubbed from the gas. They can be used for the manufacture of coal gas, but are also employed in the reveberatory furnace and in boiler furnaces. These coals have a high calorific value, from 15,300 to 15,840 B.t.u. per pound.

The bituminous furnace coals next in the series show a greater tendency to cake and soften while burning. The volatile matter in these coals is between 25 and 35 per cent. The coke yield is from 65 to 75 per cent. and the fixed carbon from one to seven per cent. less than in the coke. These coals are much employed for domestic purposes, for boiler fires, in reverberatory furnaces and in the manufacture of coal gas as well.

The final coal in the soft coal classification is bituminous coking coal which burn with a short flame. This is a very important class of coal for it is employed in the manufacture of coke for use in the blast furnace. It is also good for use under the boiler.


CANNEL COAL
Cannel Coal is characterized by a black, glossy appearance
It breaks like glass
Splinter of coal
It is easily ignited
It burns with a bright flame

GENERAL MARKET TENDENCY IS SOUND

(Continued from page 410)

larger slice of the commodity, but manufacturing has become less profitable.

Unpreventable Condition

This condition, although foreseen and guarded against, could not have been prevented. Following the old rule that any economic ill provides its own remedy, it is to be expected that the cure is already under way and that manufacturing will soon swing from a period of comparatively low earnings per unit to one where profits are rising steadily until a new and sounder balance has been established.

This may be accomplished by various means. There may be an attempt in the direction of reducing cost of production, so as to minimize the effect of high priced labor upon the unit of production. There may be a reduction of capitalization. There may be also a realization that price levels are too low and that, therefore, higher prices will have to be obtained. Possibly still other remedies will be found but the last mentioned is the most direct and, therefore, the most likely one.

Why, under these circumstances, business should continue to sell down rather than up, is difficult to explain. The weather doubtless has had a dampening effect upon the market. Spring has been late in coming and as during last year, there now is likely a sudden shift from the cool season to the warm, killing in this way much of the spring business. Easter has not brought the usual activity in the dry goods business. But the nation's prosperity does not depend on the seasonal trades exclusively; neither are they a real barometer of the state of business. The loss of a season may bring a temporary stop in the general progress of the market; it can not turn it to failure. Against the pre-season slackness stands a record of at least two good months earlier in the year and the knowledge that there is no fundamental weakness in the structure of the market.

The general market tendency, no doubt, is in an upward direction and more definite causes are needed to deflect the market from its present course than a decline in stock exchange values or a couple of weeks of unseasonable weather.

Anytime Is Gas Time

But, there are especial times

J. B. Dillon

NOW that old man Winter has packed his kit and gone back to visit the Ice House family, it will not be long until Miss Summer is with us, and, when she is here, and we wish to make her stay an enjoyable one, our first consideration is to "fix up" the kitchen so that the meals may be served with the minimum amount of worry, and that calls for a gas range.

With a gas range we get the minimum amount of heat in the surrounding atmosphere; yet, we get the maximum heat inside the oven where it is required. That is, of course, the ideal condition.

Then Miss Summer brings us the garden truck, fruits, etc., that must be canned. Again, the gas range asserts itself as being the best method of boiling the fruits, sterilizing the jars, causing less annoyance than any other article on the market for such purposes.

How will I go about telling all of this to the folks?

A small advertisement in your local newspaper; repeat it frequently; change it now and then and reproduce in your window a display in keeping with your advertisement, and meet the folks with that mien which says: "It's a pleasure to see you and you will be more pleased when you have one of my ranges working for you."

Here is how Davis and Shaw, a large department store of Denver, is advertising a range. Your first class ones may be classified along with the lady's and the rest is up to you. You cannot fail. The people have just got to have gas ranges; so sell to them!

I Like My Alcazar

says Mrs. David Grubb, 2433 Lawrence St., of her Porcelain Alcazar Combination Range.

"I LIKE my Alcazar range just fine and would not change for any other make I've ever seen. It is a splendid baker, both with coal and gas, and I have never yet had a disappointment. I like it for its beauty as well as its efficiency in cooking, because so much of a woman's time is spent in the kitchen."

How Mrs. Grubb Makes Chocolate Pudding

½ cup sugar	2 tbsp. butter
1 cup flour	1 tsp. bak. powder
½ cup milk	½ tsp. soda
1 sq. chocolate	1 tsp. vanilla
1 egg	¼ tsp. salt

Melt chocolate and butter in double boiler, add sugar and beat. Add milk, vanilla, egg. Add dry ingredients. Pour into molds and steam. Dry in hot oven.

Alcazar

Porcelain Inside-and-Out Ranges

Davis and Shaw Furniture Co

ONE PRICE—CASH OR TERMS

Fifteenth and Larimer

PROGRESS IN GAS TECHNOLOGY
Domestic and Foreign

EFFECT OF DEPTH OF FUEL BED AND RATE OF FIRING IN GAS PRODUCER

BY MEANS of an experimental gas producer burning anthracite coal at industrial rates, a study was made of the effect of two primary variables, depth of fuel bed and rate of firing, on the reactions taking place in the fuel bed. Throughout this series the steam admitted with the blast was kept constant at 0.4 lb. steam per lb. of coal. Samples were drawn simultaneously from different points in the bed through water-cooled sampling tubes, precautions being taken to prevent channelling of the bed. Temperatures at different points in the bed were also measured. Runs were made at 1.5, 3.0, and 4.5 ft. depth and with rates of 10, 40 and 70 lb. coal per square foot of grate area per hour. It was found that the heating value of the gas produced, coal gas efficiency and per cent. steam decomposed increases with both increased depth of fuel bed and rate of firing. The main effect of increasing depth of fuel bed and rate of firing is to increase the temperature in the primary reduction zone (i. e. where water is decomposed by carbon). This increase in temperature increases the proportion of CO and H_2 in the gas and cuts down the proportion of CO_2 and undecomposed H_2O. The effect of the increased time of contact in the runs having resulting (low rate of firing) is marked by the low temperatures. The thickness of the primary reduction zone and the thickness of the oxidation zone ($C + O_2 = CO_2$) is not affected by these variables. Steam passes through the oxidation undecomposed. (Paper read at Tusa meeting, American Chemical Society.)

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CONTINUOUS DISTILLATION OF TAR AND RECTIFICATION

THE treatment of tar and like substances— i.e., complex hydrocarbon mixtures whose distillation affords a considerable proportion of residue, is described in British Patent No. 239,841.

The method consists in preheating the raw material to be treated, and mixing it with the residue of a preceding distillation; the mass obtained being violently agitated by a current of a suitable non-miscible gas or vapor. This is based upon the following experimental results:

If a crude hydrocarbon is supplied into the mass of the residue left by the distillation of the said hydrocarbon at a given temperature, the mass being maintained at this temperature, the volatile portions of the hydrocarbon will be at once vaporized. The composition of the residue will not vary, provided the mass is supplied with the amount of heat corresponding to the heat of vaporization of the volatile portions, and provided the mass of the residue is violently agitated. It is necessary to agitate the mass by means of a non-miscible gas or vapor which has no oxidizing action upon the substance under treatment, and which is capable of withdrawing the volatile substances. Thus carbon dioxide gas, illuminating gas, or steam may be used. In the case of steam, the temperature of distillation is reduced, due to the well-known fact that the boiling point of distilled substances is lowered when these substances are withdrawn by water vapor.

The invention has further for its object the rectification and the treatment of the whole aggregate of the vapors discharged from the distilling apparatus. These vapors, which contain the whole of the volatile substances extracted from the raw material under treatment, are delivered into the lower part of a column containing plates of any known type providing for the bubbling of the vapors. Cold water is supplied at one or more points into the said column. When in contact with the vapors, this water is vaporized, and its vaporization causes the condensation of the vapors in the form of oils which are subjected to regression upon the plates of the column, and are hence fractioned into products whose respective composition will vary from one plate to another. The by-products which are thus fractioned are withdrawn at different heights, and the composition of the same may be regulated by the regression.

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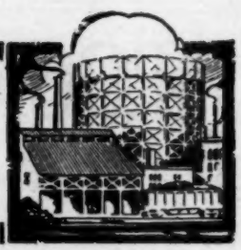
FACTORS AFFECTING THE THOMAS RECORDING GAS CALORIMETER

THE Thomas automatic recording gas calorimeter is described and its principle of operation explained. Comparison between the indications of the Thomas calorimeter and the heating values determined by a calorimeter of the Junkers type showed an average difference of 0.5 per cent. Most of the comparisons were made on carburetted water gas of about 520 B.t.u., but gases of somewhat different character were also used. The lag of the instrument in registering heating value changes was investigated. Rapid variations of room temperature affected the readings of the calorimeter to a slight extent, approximately 0.1 B.t.u. drop in reading being noted per degree F. drop in room temperature. Variations in the pressure of the gas supplied, from 2 inches to 8 inches of water, and variations in atmospheric humidity had no effect upon the readings of the calorimeter. During the four years that the instrument has been in use, only minor replacements and a small amount of routine attention have been necessary to keep the instrument in running order. (Paper presented at the Tulsa meeting of the American Chemical Society.)

NEWS OF THE GAS INDUSTRY



Commercial Managers Convene

N. E. Association Meets to Discuss Home Service

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The first speaker of the evening was J. H. Sumner of Cambridge. He told of the impression that the home service department at Providence had made upon him when he visited it during the February 1925 meeting of the New England Gas Engineers and how shortly afterwards his company began to make preparations for a home service department of its own.

The top floor of the Cambridge office building had been used for storage and similar purposes and this floor was cleaned out and remodeled into an auditorium and kitchen. The hall seats 350 people and the kitchen is about 16 by 24 feet in size. The home service organization and the new auditorium and kitchen were not ready till this spring.

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For example the aim or just what the home service department should attempt to accomplish was discussed. The problem of allocating the cost was considered. What should be the cost of the department was another topic. How much of the time of the department should be given to talking, how much to visiting customers and how much to demonstrating was a subject that was quite thoroughly discussed. In Chicago the work of the home service department has been extended to rug making and basketry, the theory being that the more work done in the home the better for the gas company.

The Radio in Home Service

That the radio is of value is indicated by the experience of one home service department that received 258 inquiries on a lecture that was postponed. On the whole, however, no tangible facts could be given to show that the home service department increases the revenue of the company. Everyone felt certain that the work did increase the revenue but no accurate figures were available. The people in Chicago move from one place to another residence or flat so often that reliable figures on the consumption are almost out of the question. In some cities where big increases in output have been made since the home service departments were organized, the population has increased at so great a rate that the total output record of the plant does not mean much in arriving at the results secured from home service work.

One point stressed at this meeting was that all those working in the home service department should do all they tell the people to do. They should cook their own bread, make their own pastry and never patronize the delicatessen store. This it was found was hard to put into practice but it is important if the department is to make the best impression upon the public.

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Therefore in order to get the people out a list of the heads of all the churches of every creed and denomination was compiled. Through these people information was secured in regard to the women's clubs connected with the churches. Letters were written to all these clubs. As a result 240 women were present at the opening of the auditorium. The hall was specially decorated for the occasion, an orchestra furnished music and tea was served. The first lecture was given on Monday evening, April 26, and 48 were present while 58 attended the next lecture held on the afternoon of Thursday, April 29th.

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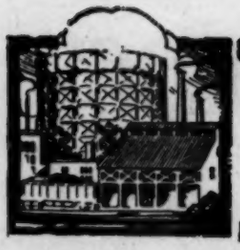

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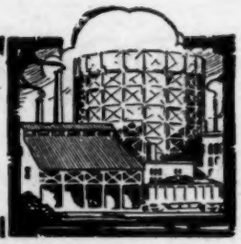

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big problems of the utility industry today," was asserted by Ralph S. Child, Bonbright & Company, New York, who further said the amount of money put into public utilities was more than the combined amount of new financing done by the railroads, iron and steel, and automobile industries last year. "This money for financing comes from many sources," he said, "such as insurance companies, national and state banks, and educational institutions. The number of individuals who buy utility bonds and stocks is growing each year. There is cooperation between the industry and its bankers, and the utility industry is based on a sound foundation and is showing steady progress." He urged, however, a wide publicity for the inner workings of the utility corporation finances as a means of gaining more confidence from the public.

M. H. Aylesworth, Manager, National Electric Light Association, New York, discussed the progress of the utility industry, and especially the electric light industry, pointed out the good work done by the women employees, emphasizing the necessity for more complete publication of information regarding the industry which is growing faster than most people realize. He also emphasized as the big outstanding problem today the relation to agriculture.

Industrial and Public Relations Symposium

Another session of interest to all branches of the industry was the Industrial and Public Relations symposium on Thursday afternoon. In this session, P. L. Thompson, Publicity Manager, Western Electric Company, New York, discussed Building Public Confidence, and emphasized the necessity of newspaper advertising constantly and regularly applied and the cultivation of sound public opinion by the use of the "open door" policy, giving facts to the public through all channels to replace the vague and incorrect impressions that the utilities are owned by Wall Street. Dr. Henry Mace Payne discussed the Impractical Theories and Panaceas and emphasized the need for fewer and better laws.

The importance of the employee as a link in Public Relations and in satisfactory operation of the utilities was stressed by H. B. Flowers, New Orleans, who spoke on Pensions and Group Insurance; W. W. Holden, San Antonio, who discussed Foremen Training; F. C. Armbruster, Shreveport, who spoke of Employees' Clubs; and C. J. Rutland, Dallas, who discussed Safety Work.

Gas Section Meetings

The Gas Section had two very satisfactory meetings. Wednesday afternoon F. C. Armbruster, Shreveport, presided, and the entire session was taken up with the discussion of the report of the Technical Committee and the resumé of the history of the use of rubber rings in pipes. On Thursday morning, H. E. Danner, Vice President, presiding, there was a discussion of Gas Refrigeration, Increasing Gas Sales with Water Heater Installation, and House Heating with Gas.

An interesting session at the Convention was a Public Relations session, over which a woman, Miss Julie Pailet, presided. The discussion was concerned with the work of the women employees, on which Miss Julie Pailet spoke, and Telling the Utility Story, a paper by Mr. W. H. Onken, of the Electrical World.

New Officers

Officers elected: President, Harold E. Borton, Vice President, Mineral Wells Electric Co., Dallas, Texas; First Vice President, Chairman Electric Section, E. H. Kifer, Vice Pres.-Gen. Mgr., San Antonio Public Service Company, San Antonio; Second Vice President, Chairman Railway Section, W. H. Burke, Mgr., Northern Texas Traction Company, Fort Worth; Third Vice President, Chairman Gas Section, C. K. Fletcher, Secy.-Treas., Fort Worth Gas Company, Fort Worth; Treasurer, F. J. Gannon, Northern Texas Traction Company, Fort Worth; Secretary, E. N. Willis, 404 Slaughter Bldg., Dallas. Members of Executive Committee for two years: J. L. Alexander, Mgr., Houston Electric Company, Houston; Alves Dixon, Mgr., Baton Rouge Electric Company, Baton Rouge; J. C. Kennedy, Vice Pres., Central & Southwest Utilities Company, San Antonio; W. B. Tuttle, Pres., San Antonio Public Service Company, San Antonio. Member Executive Committee for one year: P. E. Nicholls, Immediate Past President, Vice Pres.-Gen. Mgr., Galveston Gas Company.

Promotions in Westchester Lighting Company Organization

New York City.—Important promotions were recently made by the Board of Directors of the Westchester Lighting Company, at a meeting in New York City.

Francis A. Stratton, of Mount Vernon, who has been President of the Company since 1909, was appointed Chairman of the Board of Directors. Mr. Stratton was highly instrumental in the organization of the Westchester Lighting Company in 1900, when the gas and electric lighting plants of the larger portion of Westchester County were consolidated, and at that time he served as its Vice President and General Manager. During the first year of the Company's operation, its gross income was $860,000; it is estimated for 1926 at about $15,000,000. Progressing with the trend of times, the Company will continue to make improvements. Its 1926 annual budget for improvements and extensions will exceed $6,000,000.

E. H. Rosenquest Elected President

Mr. Stratton will be succeeded as President by E. H. Rosenquest, President of the Bronx Gas and Electric Company, who was born in Tarrytown, and has for several years been a resident of Bronxville. When, in 1893, the Bronx Gas and Electric Company received its charter and franchise to supply gas and electricity, Mr. Rosenquest was employed to superintend its operations. Later, he became General Manager, after which he served as Vice President and General Manager, finally, in 1902, to become President, which position he has since held. Mr. Rosenquest is widely known in the industry. He is a member of the Executive Committee of the Empire State Gas and Electric Association, and

holds membership in the American Gas Association, National Electric Light Association, Society of Gas Lighting, Society for Electrical Development, The Illuminating Engineering Society, and others.

B. W. Stilwell, First Vice President

Dr. B. W. Stilwell, for many years a Vice President of the Company, was designated First Vice President. Born in Yonkers, Dr. Stilwell has for many years been identified with the educational and civic affairs of his native city, and has been active in its financial progress as well. He is Vice President and a Director of the Yonkers Savings Bank, and a Director of the Westchester Trust Company. He has also served as President of the Yonkers Boa. of Education for four years.

Mr. William J. Clark, who has for some years been a Vice President of the Westchester Lighting Company, will continue to serve in that capacity, retaining under his direction the important public relations and other activities which he has guided with such signal success during the past. Mr. Clark is one of the best known men in the gas industry. He was one of the founders of the National Commercial Gas Association, and served for three years as its first President. Mr. Clark is also a member of many trade organizations, among them the Illuminating Engineering Society, the Society of Gas Engineering of New York City, New Jersey State Gas Association, Engineers' Club, National Electric Light Association, and the American Gas Association.

Edward P. Prezzano, of Mount Vernon, who came with the Westchester Lighting Company as its Secretary two years ago, was made a Vice President, and will be succeeded as Secretary by Henry A. Doering who has, for a number of years, served as Assistant Secretary. John W. Green, also of New Rochelle, will assume Mr. Doering's position, and will continue to have supervision over municipal lighting.

While these changes will doubtless come as a surprise to many residents of Westchester County, it is known that for some time promotions have been considered, and it is announced the Directors' decision was unanimous and to the satisfaction of all. They have named to important posts men who are eminently qualified; who have demonstrated unswerving loyalty to the Company, and who will carry on the policies and progressiveness which have so characterized the operation of the Westchester Lighting Company under Mr. Stratton's energetic leadership.

A general office building, which will be the largest structure of its kind in the County, is to be erected in Mount Vernon, at an estimated cost of nearly a million dollars.

Canadian Gas Men Plan Montreal Meeting

The 19th Annual Convention of the Canadian Gas Association will be held on July 8-9, 1926, in Montreal, Province of Quebec, Canada at the Mount Royal Hotel.

Illinois Industrial Course Issues Program

Champaign, Ill.—The Industrial Gas Engineering Short Course which will be given at the University of Illinois, Champaign-Urbana, Illinois, from June 21st to July 10th, 1926, will have a very interesting program. This program will take care of all the important principles and applications of industrial gas.

It is claimed that the University of Illinois is better suited to give such a course than any other university because the Engineering faculty is very much in favor of gas as an industrial fuel. The various laboratories in the University are all fully equipped with gas burning apparatus such as assay and muffle furnaces, in the chemical laboratories, various kinds of heat treating and hardening furnaces in the machine shop and other gas-fired furnaces in the ceramics laboratory.

* * *

United Light Chemical Laboratory

A chemical laboratory has been installed in the new United Light Building for the purpose of carrying on research and analytical work for all of the properties of the United Light & Power Company.

The regular analytical work will consist of testing the large quantities of coal and coke used by the gas and electric plants; the conditioning of water used in the boilers for the production of steam; the testing of oils used for the enrichment of illuminating gas, lubrication and hydraulic purposes; purifying materials used for removing the sulphur compounds from illuminating gas, and the various materials purchased regularly for general use at the various plants.

The research work will consist of work on oils and coal used in the production of illuminating gas, with a view of greater efficiency and greater economy; work on the various kinds of fire clay, fire brick and insulating material used in water gas sets and boiler furnaces; paints for the varied uses and conditions under which they are to be used, underground pipe coverings, corrosion from numerous sources, and all the problems of a chemical nature arising from time to time at the various plants.

Mr. O. K. Smith is the chemical engineer.

* * *

H. H. Stockton Elected President County Gas Company

Atlantic Highlands, N. J.—At the meeting of the Board of Directors of the County Gas Company held last Friday in Philadelphia, Pa., Howard A. Stockton who is serving his fourth year as Vice President and General Manager of the Company was elected to the Presidency.

The Annual Meeting of the stockholders was held Monday, May 3rd, in the executive offices of the company, First Avenue, Atlantic Highlands, N. J.

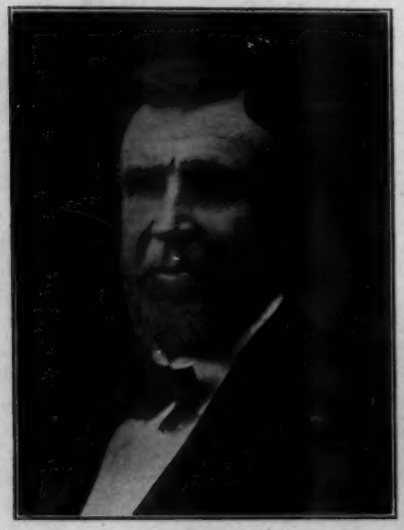
* * *

A. P. and L. to Build Gas Main Extension

Schenectady, N. Y.—The Adirondack Power and Light Corporation will begin construction early in July on a new gas main extension to be laid from the Albany high-pressure main to the Troy road. The new gas line has been approved recently by the board of directors of the power company.

75 Years in Business

The Stacey Manufacturing Co. of Cincinnati, O., celebrates its 75th birthday this season. The history of this company goes back to the very beginning of the gas industry when laboratory experiments of Murdock and Le Bon were beginning to be practically applied. George Stacey, founder of the company, was employed by the British shipbuilder and structural steel fabricator, Josh Horton, when the Stacey family first linked its fortunes with the gas industry. This was in 1840 when gas construction specialists were extremely few and far between. Stacey's application to this particular branch of Horton's activities won for him the important task of supervising the erection of a holder in New Orleans. He was boss of the job when the material was being fabricated and went with it across the Atlantic in the early forties. After the holder had reared its crown into the New Orleans skyline, George Stacey set to work to develop an idea he had harbored for some time: the making of plate and structural steel work in the United States. He chose Cincinnati for the location of his factory, operating the company under his own name. The company was operated under George Stacey's direction until the time of his death in 1880, during which year the organization which he had built up, was incorporated as The Stacey Manufacturing Company. J. Frank Stacey, now President of The Stacey Manufacturing Company, is a son of George Stacey, the founder of the business. He has devoted his entire life to the gas industry, which experience has enabled him to continually increase the business of the company. The place which the Stacey Manufacturing Company has established for itself in the manufactured gas industry is best emphasized by the fact that it can point to a record of being "The Builders of Gas Holders for 75 Years."



George Stacey, Founder of the Stacey Manufacturing Company

J. Frank Stacey, President

* * *

Acquiring Control of Blue Ridge Power, Manufacturers' Power and Others

New York City—The General Gas and Electric Corporation is expanding its southern operations through acquisition of control of the Blue Ridge Power Company, Manufacturers' Power Company and subsidiaries. These companies operate in North Carolina and South Carolina.

W. S. Barstow, president of General Gas and Electric, said that control of these properties is being obtained from John A. Law and associates, who organized them. Furthermore, Mr. Law will continue as president of the Blue Ridge Company while its operations will be managed by the Barstow organization.

Through this transaction there will come under one management these various properties, duplication of investment will be eliminated and additional sources of power will be made available to supply increasing demands.

The section served by the system in South Carolina now is connected by 110,000 volt transmission lines with the Broad River Power Company properties.

* * *

Bismarck Gas Co. Plans Improvements

Bismarck, N. D.—The Consolidated Utilities Company, successor to the Bismarck Gas Company and the Valley City Gas Company, is planning extensions to its plant and main system in Bismarck this year as soon as the material can be delivered here. The company of which Senator Frank E. Ploy-har is president, has placed orders for pipe to extend about five miles of main in this city, and expects to complete its distributing system to such a point that the majority of the Bismarck people will be able to avail themselves of gas service this year.

A carload of white enamel cabinet gas ranges of the latest design and improvements is expected here within the next 10 days.

W. E. Vaughn, formerly of Peoria, Ill., will be the manager in charge of the business here, including the sale of all gas appliances. The company expects to spend in the neighborhood of $75,000 this summer to improve the service in Bismarck and to increase the capacity of its plant, so that local citizens can be assured of good reliable gas service.

* * *

Fort Lauderdale Installs Gas Plant

Fort Lauderdale, Fla. — This city's first plant is almost ready for operation. All construction work has been completed and manufacture of gas only awaits installation of machinery and completion of gas mains.

Company officials estimate that first homes will be furnished late in April.

Gas Men Plan Fine Program for Wisconsin Meeting

The program of the Gas Section of the Wisconsin Utilities Association, which will be held at Hotel Retlaw, Fond du Lac, Wisconsin, on Thursday and Friday, May 13 and 14, 1926, is as follows:

Thursday morning, May 13, 9-10

Registration—Main lobby of the Hotel Retlaw, 10 A. M.

Technical Session in the Empire room on the mezzanine floor.

Address of Welcome—Mayor R. D. Haentze.

Response.

Chairman's Address—Mr. S. B. Sherman.

Gas Fellowship Report—"Experiments on the Proper Size of Combustion Chamber for Furnaces," Professor O. L. Kolwalke and Mr. A. W. Carlson of the University of Wisconsin.

Discussion.

Committee Appointments.

Announcements.

Paper—"Gummy Deposits in Mains and Meters"—Mr. George E. Wagner, Madison Gas and Electric Company.

Discussion.

Thursday afternoon, May 13, 12.30

Luncheon for the men in the Summer Dining room and for the women in the Colonial Room on the Mezzanine floor of the Hotel Retlaw.

2.00 P. M. Empire Room

Reports of our Representatives on the Managing Committees of the American Gas Association.

Sales, A National Problem—R. J. Canniff, Chairman Commercial Section, American Gas Association.

4.00 P. M.

Inspection Trip to Vertical Retort Coal Gas Plant of the Wisconsin Power and Light Company.

Thursday evening, May 13, 6.30

Annual Gas Section Dinner on the Main Dining Room, Hotel Retlaw; Music by Si Marberg's Famous Orchestra.

The Entertainment Program includes: Royal McLain and Cleo and Ruth Smith of Fond du Lac. Professor W. C. Hewith (of the Oshkosh Normal School) well known humorist has been selected to tell the new stories. Souvenirs will be given the visiting ladies.

9.00 to 12.00 P. M.—Dancing in the Main Dining Room and Summer Dining Room.

Friday Morning, May 14

9.30 A. M.—Empire Room

Paper—"Industrial Gas Problems and Progress," Mr. G. H. Head of the Wisconsin Gas and Electric Company.

Discussion.

Report of the Nominating Committee.

Election of Chairman and Vice-Chairman.

Paper—"Recent Developments in the Gas Business," Mr. Lewis Stein of the Northern States Power Company.

Discussion.

Paper—"Application of Gas to Railroad Shops," Mr. Fred W. Hainer of the Wisconsin Power and Light Company.

Discussion.

Installation of newly elected officers.

Adjournment.

Friday Afternoon, 12.30

Luncheon in the Summer Dining Room for both men and women.

2.00 P. M.—Empire Room

Inspection trip through "Soo Line" Railroad shops including demonstration of a Gas Flue Furnace, Paint Burning, and Tire Removal.

Sight seeing trip around the city and the East side of Lake Winnebago.

Women's Entertainment

A luncheon for the visiting women will be held Thursday noon in the Colonial Room, Mezzanine floor, Hotel Retlaw. The luncheon will be followed by a card party. On Friday morning there will be an automobile ride. While there will probably be nothing on the Technical Program which will particularly interest women, they will find the dinner and dancing party very enjoyable. A Committee of the Fond du Lac women will see that the visiting women get acquainted and enjoy their stay. Please register at the Convention registration desk upon arrival.

Officers of the Gas Section Wisconsin Utilities Association

Chairman—S. B. Sherman, Wisconsin Gas and Electric Company, Racine; Vice-Chairman—George E. Wagner, Madison Gas and Electric Company, Madison.

Local Convention Committee

Chairman—M. H. Frank; A. E. Gerg, Fred W. Hainer.

Coke Committee

Chairman—M. H. Frank, Wisconsin Power and Light Company; Wm. C. Butterworth, Platteville Gas Company; A. F. Davey, Wisconsin Public Service Corporation; Geo. W. Briggs, Northern States Power Company; W. R. Lacey, Milwaukee Gas Light Company.

Nominating Committee

Chairman—John T. Mason, Milwaukee Gas Light Company; A. F. Davey, Wisconsin Public Service Corporation; M. H. Montross, Wisconsin Valley Electric Company.

Executive Secretary—John H. Cadby, 445 Washington Building, Madison.

* * *

Tri-City Gas to Make Improvements

Gadsden, Ala.—The Tri-City Gas Company expects to spend $20,000 in improving their property in Gadsden, according to the manager, J. F. Crawford. This money will be spent in laying new mains where the old gas mains have become too small to serve the increased number of patrons from these lines.

Heretofore, at busy times of the day, the gas pressure would be so low as to not be of much service, but with the new mains laid the company expects to bring the service on these lines up to where it should be. About $10,000 will be expended for this purpose alone.

Several new extensions will also be laid into territory which is not now being served and when this work is completed it will give citizens in that territory a service they have long desired and will greatly increase the company's patrons. The amount to be spent on this will be between $5,000 and $10,000.

Manager Crawford has made many improvements since his connection with the local plant and is giving the citizens of Gadsden a most efficient service, which is highly appreciated by the company's patrons.

Pacific Gas Men Meet in Portland, Ore.

The Northwest Regional Conference of the Pacific Coast Gas Association was held in Portland, Oregon, May 6 and 7, 1926.

The program of the meeting was as follows:

Thursday, May 6—Meeting of Board of Directors. Sectional conferences: Accounting section, Commercial section, Public Relations section, Technical section.

Meeting of Appliance Certification Committee.

The morning of Thursday, May 6, was open for individual committee meetings, the initiative for calling these meetings resting with chairmen.

Friday, May 7.—General meeting, Ball Room (Multnomah Hotel), "The Human Element and Actual Leakage", R. V. Wilson, Civil Engineer, Pacific Gas and Electric Company, San Francisco. "We are all Accountants", A. E. Peat, Treasurer and Comptroller, Southern California Gas Company, Los Angeles. General meeting continued. "Relations of the Industrial Load and Tariff Structure", L. C. Haffner, Industrial Engineer, Portland Gas and Coke Company, Portland. "From the Inside Out", D. L. Scott, Director of Public Relations, Los Angeles Gas and Electric Corporation, Los Angeles.

A Dinner-Dance was held Friday night in the ball-room of the Multnomah Hotel.

Operating Division of New England Gas Association to Meet in May

Boston, Mass.—The first meeting of the Operating Division of the New England Gas Association will be held at New Ocean House, Swampscott, Mass., on May 20 and 21. An interesting program is being developed which your directors believe will be of value to all in the Engineering end of our industry. The program outlined is as follows:

Thursday, May 20, 1926—6:00 P. M., Dinner; 8:00 P. M., First Session.

Short talk by the Hon. Henry C. Attwill, Chairman of the Department of Public Utilities of the State of Massachusetts. This talk will be followed by a paper on "Soft Coal Operation." If time permits, questions from the "Question Box" will be worked in after this paper and discussion.

Adjournment at 10:00 P. M.

There will be a Bridge Party for the ladies, with suitable prizes, while the above meeting is in progress, so bring your wife.

Friday, May 21, 1926 —10 A. M. Reconvene in Convention Hall.

Paper on "High Pressure Distribution" with description of 1,200 mile system at Joliet, Illinois, by Warren D. Stewart, Engineer, Stone & Webster. This paper will be followed by questions from the "Question Box" until adjournment at 12:30 P. M.

Questions

1. Value and results from installation of Steam Accumulators?
2. Value and results from installation of Waste Heat Boilers?
3. What is being done in Water Gas Tar dehydration?
4. What results from various types of Cast Iron Pipe Joints?
5. What experience with various types of covers for Wrought Iron and Steel pipe?

This session will end the formal part of our program, leaving the members free to follow their own desires. For those who wish, arrangements have been made so that they may have an afternoon of golf at one of the local clubs. The ladies will be taken care of by a trip along the North Shore to Gloucester and Cape Ann, one of the most beautiful drives in the country.

To Visit Gas Plant at Malden

The Malden Gas Light Company and the Lynn Gas and Electric Company plan to hold open house Friday afternoon, May 21, offering an opportunity for those who desire to visit either or both of these plants. At Malden, they have in operation the latest type Glover-West Vertical Retorts, also Soft Coal Operation in their water gas plant, as well as a waste heat boiler in connection with their Verticals. At Lynn, a new office building with the latest of equipment is well worth visiting, while at the Works you can see in operation a Koppers Oven Plant, heated by producers with waste heat boilers. You will also find in operation at the Lynn plant a back run equipment with water sprays in the superheater, also breeze collectors.

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Burroughs Exhibit at Natural Gas Association Convention

Customers' accounting has been chosen as the principal feature for the Burroughs Adding Machine Company's exhibit at the Natural Gas Association Convention, Tulsa, Oklahoma, May 17 to 20.

Two different accounting plans will be shown in operation: 1, The bill and ledger plan; 2, The stub accounting plan. The demonstrations will show these plans as they actually are operated on Burroughs public utility machine by various power and light companies.

Under the bill and ledger plan, the machine writes the bill, the cashier's stub, posts the debit on the ledger, and makes up a sales audit sheet, in one operation. At the same time, it accumulates totals of both present and previous readings, of consumption, and all revenue items, giving a separate total of each at the end of the run.

With the stub plan, an extra stub of the bill takes the place of the ledger. When this plan is used, the machine prints the necessary information on the extra stub automatically. This ledger stub is held in the "pending" file until the account has been paid. Under this plan the meter readers sheet furnishes all the continuous records necessary.

All of the machines displayed in the exhibit will be of the latest design. Newly developed features of the public utility machine will be demonstrated. And the latest Burroughs product—a low-cost, portable adding machine—will be presented.